IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.	:	**10/031,421** Confirmation No. **6591**
Applicant	:	**Tomasz Rudas**
Filed	:	**January 18, 2002**
TC/A.U.	:	**1744**
Title	:	**An Organic Waste Material Treatment Process**
Docket No.	:	**D5053-00016**
Customer No.	:	**08933**

CERTIFICATE OF MAILING, 37 C.F.R. §1.8(a)

I certify that this correspondence and the enclosures mentioned therein are being deposited by First Class U.S. Mail with sufficient postage on the date shown below, addressed to Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450.

Richard A. Paikoff

Richard A. Paikoff, Reg. No. 34,892

6/28/06

Date

DECLARATION OF TOMASZ RUDAS PURSUANT TO 37 C.F.R. § 1.132

I hereby declare as follows:

1. I am the same Thomasz Rudas who is named as the inventor of the invention described and claimed in the patent application referenced above.

2. I have reviewed the prior art cited by the Examiner in the Office Action in the patent application referenced above, including the McCann reference, U.S. Patent No. 5,447,850, and the Cotton reference, U.S. Patent No. 4,565,552.

3. A fundamental difference between the present invention and McCann is the way in which anaerobic conditions are achieved. In the present invention the liquid, which is anaerobic digestion fluid, is flooded after the waste is placed in an oxygen free environment.

4. Thus, in the present invention, there are three main stages, as follows: (a) aerobic stage where air (oxygen) is added; (b) anoxic stage where air addition is stopped and the vessel is sealed and oxygen is consumed (anaerobic environment); and (c) vessel is flooded with anaerobic liquid containing anaerobic bacteria that: (I) would be killed if oxygen was present in the vessel when they were added; and (II) immediately start producing methane gas that would create an explosive atmosphere if there was air (oxygen) in the vessel.

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5. Thus, flooding of the vessel after the biological purging of the oxygen inside the vessel is critical and a significant technical improvement over McCann.

6. Please note the disclosure of McCann at column 4, lines 45-60 of that reference, as follows: (a) an aerobic stage where air (oxygen) is added; (b) the vessel is flooded with either water or liquid residue from the previous (anaerobic) cycle; and (c) the vessel is subsequently sealed. Regarding step (b), a significant problem is posed if clean water is used because: (I) an anaerobic environment is created inside the waste mass which generates methane; (II) the methane mixes with the oxygen in the vessel and creates an explosive atmosphere (hence the need for purging); (III) oxygen consumption by aerobic bacteria actually reduces dramatically as anaerobic bacteria "take over" (thus, one week is needed for the oxygen to be consumed; and (IV) the liquid residue would then have to be disposed of somewhere else.

7. If liquid residue from a previous cycle is used: (a) an anaerobic environment is quickly created inside the waste mass; (b) initially, some methane is generated but the oxygen present will kill most of the methanogenic bacterial population, increasing the length of time for the process as that population slowly recovers (hence it takes one week before anaerobic digestion starts); (c) it also immediately creates an explosive atmosphere inside the vessel; and (d) oxygen consumption ceases, hence the need for the use of the external purge gas.

8. In light of the above, it can be seen that flooding of the vessel in McCann occurs before the vessel is in an oxygen-free environment, which exposes the process to the significant limitations described above.

9. The system of McCann has to purge the system after one week, because by flooding the vessel with liquid and then sealing it: (a) partial anaerobic conditions are created that will generate some methane which will mix with the oxygen, thus creating an explosive

atmosphere, and (b) by creating these anaerobic conditions when the vessel is flooded, the aerobic bacteria are adversely affected.

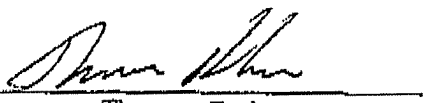
10. Therefore, the oxygen content would never be fully consumed. McCann does state that "essentially all of the oxygen is consumed," (see column 4, lines 57-58) which implies that there is still oxygen present.

11. In contrast, in the process of the present invention, the oxygen is consumed prior to adding liquid, and therefore there is no need for purging. This is achieved because the vessel is sealed first; the aerobic bacteria are then in a closed environment and they naturally consume all of the oxygen, as would any oxygen-consuming organism. Thus, when the anaerobic liquid is added the vessel contains no oxygen, and therefore there is no creation of an explosive atmosphere.

12. Thus, I declare that the present invention is a significant improvement over the disclosure of McCann, even when combined with Cotton.

13. I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this patent application or any patent issuing thereon.

22/06/06
Date

By: 
Thomasz Rudas